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November 10, 2010

Reference No. 056393

Mr. Michael Berkoff  
Remedial Project Manager  
U.S. Environmental Protection Agency - Region V  
Superfund Division, Remedial Response Section #2  
77 West Jackson Boulevard (SR - 6J)  
Chicago, Illinois 60604 - 3590



Dear Mr. Berkoff:

Re: Remedial Action Monthly Progress Report No. 8 - October 2010  
12<sup>th</sup> Street Landfill Operable Unit No. 4  
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site  
Allegan and Kalamazoo County

As required by Task 4, Progress Reports in the Statement of Work for the Remedial Design and Remedial Action at the 12<sup>th</sup> Street Landfill Operable Unit No. 4, please find attached the Progress Report No. 8 for the period of October 1, 2010 through October 31, 2010.

Should you have any questions or require any additional information, please do not hesitate to contact the undersigned.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

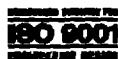


Gregory A. Carli, P. E.

AS/cs/26

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**Remedial Action Progress Report No. 8**  
**October 1, 2010 to October 31, 2010**

**Remedial Design and Remedial Action**  
**12th Street Landfill, Operable Unit No. 4**  
**Otsego, Michigan**

This progress report is being submitted to the United States Environmental Protection Agency (U.S. EPA) in accordance with Task 4: Progress Reports and the Summary of Major Deliverables/Schedule contained in the Statement of Work for the Remedial Design and Remedial Action pursuant to the terms of the Consent Decree for the Design and Implementation of Certain Response Action at Operable Unit No. 4 and the Plainwell, Inc. Mill Property (Site) of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (Consent Decree) which became effective February 22, 2005.

**1. WORK PERFORMED**

- On October 6, 2010, Mid America Lining Company (MAL) completed liner installation.
- On October 8, 2010, MAL completed installation of the geonet composite material and mobilized off-Site.
- On October 11, 2010, Progress Report No. 7 was submitted to U.S. EPA. Included with the progress report were the temporary water treatment system effluent analytical results (one batch), analytical results for 12 soil verification samples collected from the additional excavation on the Wyoming Asphalt Plant property, data for volatile organic compound analysis for previous samples collected on the Wyoming Asphalt property in August 2010, which were not available for the August 2010 monthly progress report, results for 22 liner destruct samples, and the liner installation quality assurance/quality control (QA/QC) data for September 2010.
- On October 20, 2010, CRA submitted to the U.S. EPA and Michigan Department of Natural Resources and Environment (MDNRE) a response regarding the applicability of a storm water permit for the Site. CRA concluded that a storm water permit was not required because the landfill will have adequate cover and controls to prevent contact with any contaminants present at the Site (regardless of whether or not the contaminants are classified as industrial materials), therefore, there is no potential exposure of storm water to contaminants.
- On October 27, 2010, CRA submitted to the U.S. EPA a photographic log of erosion at the Site caused by rain events on October 24 and 26, 2010. The rain events caused approximately five to six cubic yards of general fill material to wash into the Kalamazoo River at the location of the swale outlet along the MDNRE property boundary.

**Remedial Action Progress Report No. 8**  
**October 1, 2010 to October 31, 2010**

**Remedial Design and Remedial Action**  
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- On October 28, 2010, representatives from the MDNRE Superfund Section and MDNRE Kalamazoo District Soil Erosion Sedimentation Control were on-Site to review erosion damage and the general fill material wash-out into the Kalamazoo River.
- On October 29, 2010, the U.S. EPA indicated that the majority of the general fill material, which washed into the Kalamazoo River, should be removed following the proposed approach indicated by CRA. The proposed approach would ensure that during the excavation and removal of the materials, care would be taken to not contact or disturb the erosion controls along the Kalamazoo River bank and the sediments present along the bed of the river.
- On October 29, 2010, the U.S. EPA provided additional comments to incorporate into the long term monitoring section for the final design. The additional comments addressed the installation and sampling specification for the groundwater wells to be installed on-Site. The modifications are as follows:
  - indicated screen intervals for the shallow water table wells
  - the addition of polychlorinated biphenyls (PCBs) and total metals (Total Analyte List) to the parameter list for the vertical aquifer sampling (VAS) analysis
  - the addition of turbidity measurements to the field screening parameters during VAS
  - indicated VAS intervals of five feet from the depth of the water table to 40 feet below the water table

In addition, the US.EPA and MDNRE suggested that monitoring wells MW-108 and MW-109 be moved to the north to better monitor down-gradient conditions.

- The following field activities were conducted during the October 2010 reporting period:
  - Site security is present only on weekends. Security patrols are conducted from 5:00pm on Friday to 7:00am on Monday.
  - On-going verification surveying of landfill and surrounding areas, including surveying of liner installation, grading for swale channels, and the location of the groundwater monitoring wells.
  - Installed liner on remaining portion of Site (western half). Fourteen liner destruct samples were collected and submitted for laboratory testing. Results for the liner destruct samples and the liner installation quality assurance/quality control (QA/QC) data are presented in Attachment A.

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**Otsego, Michigan**

- Installed liner flap for surface water management on slopes along the northwest, west, and southwest sides of the Site. Extended liner flap along the south side of the Site including the southeast and southwest corner areas.
- Installed geonet composite material on top of the liner on the remaining portion of the Site (western half).
- Installed wormgear clamps on gas vents.
- Backfilled anchor trench along the northwest, west, and south side of Site. It is noted that the backfilling of the anchor trench is now complete.
- Delivery and placement of general fill material on geonet composite material on remaining portion of landfill (northwest, west and southwest portions of landfill) with the exception of the area of the former temporary access road near the southeast corner of the Site.
- Placement of general fill material on geonet composite material in swale areas along the north, west, and south sides of landfill with the exception of the swale area located in the area of the former temporary access road near the southeast corner of the Site..
- Placed bottom stone layer along liner flap and swales along north and west MDNRE property boundaries and along the north, west, and southwest sides of the Site.
- Excavated swale channels along the north and west MDNRE property boundaries, the southeast corner area, and along the north and northwest sides of the Site. In addition, excavated three of the channel outlets on the north side of the Site.
- Delivery and placement of topsoil on upper slopes along the north and west MDNRE property boundary, and the north and west sides of the Site. Topsoil also placed on east slope and portion of the top of the landfill at northeast corner area.
- Installed geoweb material and MDOT 22A material in swale along the west MDNRE property boundary.
- Removed former Site fence and graded area along the south side of the Site.
- Repaired the liner puncture located in the area of the former temporary access road (near southeast corner of the Site).
- Built access road at the former Site entrance.
- Installed hay bale check dams in swales adjacent to the MDNRE property boundaries and re-installed hay bale check dams and replaced silt fence after rain events on October 24 and 26, 2010.

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**Otsego, Michigan**

- Repaired erosion damaged areas across Site included the wash-out on the east side of Site adjacent to the MDNRE property, removing general fill materials from swales adjacent to the MDNRE property, and repair of erosion channels along the west side of the Site.

**2. DATA RECEIVED**

- Fourteen liner destruct tests were submitted for laboratory analysis during the October 2010 reporting period. Results exceeded requirements and are provided as Attachment A. In addition, liner installation QA/QC data are also presented as Attachment A.

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**3. MODIFICATIONS TO WORK PLANS OR OTHER SCHEDULES PROPOSED TO, OR APPROVED BY, THE U.S. EPA**

- Limited Site work occurred on October 25 and 26, 2010 due to inclement weather.

**4. PROBLEMS ENCOUNTERED AND PLANNED RESOLUTION**

- As previously noted above, work at the Site was stopped due to inclement weather conditions for a total of two days during the October 2010 reporting period. Site activities were limited to inspection and maintenance of the soil erosion and sedimentation controls.
- As previously noted above, the rain events on October 24 and 26, 2010 caused approximately five to six cubic yards of general fill material to wash into the Kalamazoo River at the location of the swale outlet along the MDNRE property boundary. CRA intends to remove as much of the general fill material that washed into the Kalamazoo River as possible without damaging the erosion controls in the area or disturbing the river bed sediments. In addition, the rain events on October 24 and 26, 2010, cause erosion damage to various areas of the landfill side slopes. Grading and repairs to these areas were conducted immediately following the rain events, but caused approximately one week delay in the overall construction schedule.

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**Otsego, Michigan**

- CRA Services is relatively on schedule with the revised master schedule submitted on September 8, 2010. CRA will conduct work on a few Saturdays during the month of November to ensure project activities remain on schedule.

**5. WORK ANTICIPATED DURING THE NEXT REPORTING PERIOD**

- In accordance with the RAWP, the following field activities are scheduled to start during the November 2010 reporting period:
  - Continue construction of swale areas with geoweb material, turf reinforcement mat, and upper stone layer for toe drain.
  - Construct swale channel outlets and discharge outlets to Kalamazoo River.
  - Continue placement of topsoil on top portions and along lower swale slopes of Site.
  - Install geonet discharge stone layer around the east north and west sides of Site.
  - Seed and apply erosion controls to protect seeding
  - Conduct VAS for deep monitoring well locations.
  - Install site security fence.

**6. ANTICIPATED DEVELOPMENT WITH WORK DURING THE NEXT PERIOD**

- Continue to hold weekly conference calls and/or meetings between U.S. EPA and Project Technical Team
- A pre-final construction meeting has been scheduled for Tuesday, November 16, 2010 at 10:00 am EST.

**7. OTHER RELEVANT INFORMATION**

- No other Site related information to report

**ATTACHMENT A**

**LINER MATERIAL QUALITY ASSURANCE/QUALITY CONTROL DATA**



## Mid - America Lining Co.

### Panel Placement Log

Project Name: 12 th Street Landfill

Page: 7

Date: 10/4/2010

Project Location: Otsego Twp., MI.

Material Description: 40 Mil LLDPE Tx

Panel Number	Roll Number	Panel Length	Panel Width	Square Footage	Comments
76	3224	166	22.5	3735	
77	3224	144	22.5	3240	
78	3224	118	22.5	2655	
79	3224	90	22.5	2025	
80	3109	62	22.5	1395	
81	3109	33	22.5	742.5	
82	3109	18	12	108	
83	3109	270	22.5	6075	
84	3109	155	22.5	3487.5	
85	3226	122	22.5	2745	
86	3226	85	22.5	1912.5	
87	3109	45	22.5	1012.5	
88	3226	24	12	144	
89	3226	270	22.5	6075	
90	3226	152	22.5	3420	
91	3223	90	22.5	2025	
92	3223	239	22.5	5377.5	
93	3223	237	22.5	5332.5	
94	3223	110	22.5	2475	
95	3227	126	22.5	2835	

12/00 - E.D.R.

Daily Square Footage

Cont.

Square Footage to Date

Cont.

Q.C. Initials:

E.D.R.



**Mid - America Lining Co.**

Page: 8

## ***Panel Placement Log***

Project Name: 12 th Street Landfill

Date: 10/4/2010

Project Location: Otsego Twp., MI.

**Material Description:** 40 Mil LLDPE Tx

12/00 - EDR

### Daily Square Footage

82,625

### Square Footage to Date

267.513

| Q.C. Initials:

E.D.R.



**Mid - America Lining Co.**

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**Panel Placement Log**

Project Name: 12 th Street Landfill

Date: 10/5/2010

Project Location: Otsego Twp., MI.

Material Description: 40 Mil LLDPE Tx

Panel Number	Roll Number	Panel Length	Panel Width	Square Footage	Comments
102	3108	79	19	1501	
103	3108	80	22.5	1800	
104	3108	79	14	1106	
105	3108	38	12	456	
106	3108	41	12	492	
107	3108	63	22.5	1417.5	
108	3108	60	22.5	1350	
109	3108	61	22.5	1372.5	
110	3108	64	22.5	1440	
111	3108	66	22.5	1485	
112	3222	222	22.5	4995	
113	3222	217	22.5	4882.5	
114	3222	214	22.5	4815	
115	3108	28	22.5	630	
116	9335	39	22.5	877.5	
117	9335	72	7.5	540	
118	9335	72	7.5	540	
119	9335	48	7.5	360	

12/00 - E.D.R.

Daily Square Footage	<u>30,060</u>
Square Footage to Date	<u>297,573</u>

Q.C. Initials: E.D.R.



**Mid - America Lining Co.**

**TRIAL WELD LOG**

Page: 3

Project Name: 12th Street Landfill Project Location: Otsego Twp., MI. Material Description: 40 Mil LLDPE

Mat. Type	Date / Time	Ambient Temp.	Seamer Initials	Machine Number	Extrusion Welds		Fusion Welds		Peel Values Lbs. / Inch			Shear Values Lbs. / Inch			(P / F)
					Barrel Temp.	Preheat Temp.	Wedge Temp.	Speed Setting	85	84	82	119	119	120	
S/S	10/4/10 8.35	35	JS	D - 1	N/A	N/A	750	600	85	84	82	119	119	120	P
S/S	10/4/10 8.39	35	RM	D - 3	N/A	N/A	750	550	89	87	87				P
T/T	10/4/10 8.45	35	RM	D - 3	N/A	N/A	750	500	92	92	96	115	119	121	P
S/S	10/4/10 8.40	35	MR	D - 5	N/A	N/A	750	600	104	98	98				P
T/T	10/4/10 8.35	35	MR	D - 5	N/A	N/A	750	500	89	98	87	110	117	125	P
S/S	10/4/10 13.42	50	JS	D - 1	N/A	N/A	750	600	104	101	104				P
S/S	10/4/10 13.45	50	MR	D - 5	N/A	N/A	750	600	85	88	87	114	114	115	P
T/T	10/4/10 13.40	50	MR	D - 5	N/A	N/A	750	500	86	95	97	105	106	110	P
S/S	10/4/10 13.50	50	RM	D - 3	N/A	N/A	750	550	70	79	75	96	98	99	P
S/S	10/4/10 13.45	50	MR	D - 5	N/A	N/A	750	600	76	81	78				P
T/T	10/4/10 13.40	50	MR	D - 5	N/A	N/A	750	500	74	68	73	93	95	98	P
S/S	10/4/10 13.50	50	RM	D - 3	N/A	N/A	750	550	76	73	80				P
T/T	10/4/10 13.40	50	MR	D - 5	N/A	N/A	750	500	81	80	85	88	89	92	P
S/S	10/4/10 13.50	50	RM	D - 3	N/A	N/A	750	550	85	87	73	95	98	100	P
T/T	10/4/10 13.40	50	RM	D - 3	N/A	N/A	750	500	83	88	85				P
T/T	10/4/10 17.10	60	HM	MX - 9	300	200	N/A	N/A	85	80	82	98	102	102	P
S/S	10/5/10 8.40	35	MR	D - 5	N/A	N/A	750	550	94	91	94	130	131	135	P
T/T	10/5/10 8.25	35	MR	D - 5	N/A	N/A	750	500	94	99	104	106			P
S/S	10/5/10 8.38	35	JS	D - 1	N/A	N/A	750	600	98	92	95	107	108	111	P
T/T	10/5/10 8.39	35	JS	D - 1	N/A	N/A	750	600	98	86	88	114	119	121	P

12/00 - E.D.R.

Q.C. Initials: E.D.R.



## **TRIAL WELD LOG**

*Mid - America Lining Co.*

Page: 4

Project Name: 12th Street Landfill Project Location: Otsego Twp., MI. Material Description: 40 Mil LLDPE



**Mid - America Lining Co.**

**PANEL SEAMING FORM**

**Page:** 9

Project Name: 12 st Landfill Project Location: Otsego Twp, MI Material Description: 40 Mil LLDPE

Date / Time	Seam Number	Seam Length	Seamer Initials	Machine Number	Temp. Setting	Weather	Winds	Ambient Temp.	DS Test P/F	Comments
9/23/2010 9.33	68/70	168	RM	D - 3	750	Humid	5-10	80	P	Smooth / Smooth
9/23/2010 8.40	69/70	22.5	MR	D - 5	750	Humid	5-10	80	P	Smooth / Smooth
9/23/2010 8.46	69/71	82	RM	D - 3	750	Humid	5-10	80	P	Smooth / Smooth
9/23/2010 9.02	70/71	162	RM	D - 3	750	Humid	5-10	80	P	Smooth / Smooth
9/23/2010 8.55	71/72	241	MR	D - 5	750	Humid	5-10	80	P	Smooth / Smooth
9/23/2010 9.28	72/73	234	MR	D - 5	750	Humid	5-10	80	P	Smooth / Smooth
9/23/2010 10.02	73/74	222	RM	D - 3	750	Humid	5-10	80	P	Smooth / Smooth
9/23/2010 10.15	74/75	210	MR	D - 5	750	Humid	5-10	80	P	Smooth / Textured
10/4/2010 9.30	76/77	157	JS	D - 1	750	Cold	5-10	40	P	Smooth / Smooth
10/4/2010 9.36	77/78	132	RM	D - 3	750	Cold	5-10	40	P	Smooth / Smooth
10/4/2010 9.40	78/79	104	MR	D - 5	750	Cold	5-10	40	P	Smooth / Smooth
10/4/2010 9.51	79/80	76	JS	D - 1	750	Cold	5-10	40	P	Smooth / Smooth
10/4/2010 10.00	80/81	48	MR	D - 5	750	Cold	5-10	40	P	Smooth / Smooth
10/4/2010 10.05	81/82	19	RM	D - 3	750	Cold	5-10	45	P	Smooth / Smooth
10/4/2010 10.55	83/84	177	JS	D - 1	750	Cold	5-10	45	P	Smooth / Smooth

12/00 - E.D.R.

QC Initials : E.D.R.



**Mid - America Lining Co.**

**PANEL SEAMING FORM**

**Page:** 10

Project Name: 12 st Landfill Project Location: Otsego Twp, MI Material Description: 40 Mil LLDPE

Date / Time	Seam Number	Seam Length	Seamer Initials	Machine Number	Temp. Setting	Weather	Winds	Ambient Temp.	DS Test P/F	Comments
10/4/2010 11.00	84/85	140	MR	D - 5	750	Cold	5-10	45	P	Smooth / Smooth
10/4/2010 11.00	85/86	104	RM	D - 3	750	Cold	5-10	45	P	Smooth / Smooth
10/4/2010 11.20	86/87	66	MR	D - 5	750	Cold	5-10	45	P	Smooth / Smooth
10/4/2010 11.30	87/88	24	RM	D - 3	750	Cold	5-10	45	P	Smooth / Smooth
10/4/2010 11.20	83/89	270	JS	D - 1	750	Cold	5-10	45	P	Smooth / Smooth
10/4/2010 12.00	89/90	154	MR	D - 5	750	Cold	5-10	45	P	Smooth / Smooth
10/4/2010 11.40	89/91	88	MR	D - 5	750	Cold	5-10	45	P	Smooth / Smooth
10/4/2010 11.45	90/91	22.5	MR	D - 5	750	Cold	5-10	45	P	Textured / Textured
10/4/2010 14.03	90/92	150	JS	D - 1	750	Cold	5-10	45	P	Smooth / Smooth
10/4/2010 13.55	91/92	91	JS	D - 1	750	Cold	5-10	45	P	Smooth / Smooth
10/4/2010 14.00	92/93	237	MR	D - 5	750	Cold	5-10	45	P	Smooth / Smooth
10/4/2010 14.48	93/94	112	RM	D - 3	750	Cold	5-10	45	P	Smooth / Smooth
10/4/2010 14.30	93/95	125	RM	D - 3	750	Cold	5-10	45	P	Smooth / Smooth
10/4/2010 14.40	94/95	22.5	RM	D - 3	750	Cold	5-10	45	P	Textured / Textured
10/4/2010 14.52	94/96	108	JS	D - 1	750	Cold	5-10	45	P	Smooth / Smooth

1200 - E.D.R.

QC Initials : E.D.R.



**Mid - America Lining Co.**

**PANEL SEAMING FORM**

**Page:** 11

Project Name: 12 st Landfill Project Location: Otsego Twp, MI Material Description: 40 Mil LLDPE

Date / Time	Seam Number	Seam Length	Seamer Initials	Machine Number	Temp. Setting	Weather	Winds	Ambient Temp.	DS Test P/F	Comments
10/4/2010 14.37	95/96	127	JS	D - 1	750	Cold	5-10	60	P	Smooth / Smooth
10/4/2010 15.05	96/97	234	MR	D - 5	750	Cold	5-10	60	P	Smooth / Smooth
10/4/2010 15.54	97/98	82	JS	D - 1	750	Cold	5-10	60	P	Smooth / Smooth
10/4/2010 15.38	97/99	149	JS	D - 1	750	Cold	5-10	60	P	Smooth / Smooth
10/4/2010 15.40	98/99	22.5	RM	D - 3	750	Cold	5-10	60	P	Textured / Textured
10/4/2010 16.13	98/100	80	RM	D - 3	750	Cold	5-10	60	P	Smooth / Smooth
10/4/2010 15.52	99/100	148	RM	D - 3	750	Cold	5-10	60	P	Smooth / Smooth
10/4/2010 16.00	100/101	226	MR	D - 5	750	Cold	5-10	60	P	Smooth / Smooth
10/4/2010 11.49	76/84	40	RM	D - 3	750	Cold	5-10	60	P	Textured / Textured
10/4/2010 11.55	76/85	39	RM	D - 3	750	Cold	5-10	60	P	Textured / Textured
10/4/2010 12.01	76/86	38	RM	D - 3	750	Cold	5-10	60	P	Textured / Textured
10/4/2010 12.07	76/87	39	RM	D - 3	750	Cold	5-10	60	P	Textured / Textured
10/4/2010 12.13	76/88	22	RM	D - 3	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 13.45	101/112	222	MR	D - 5	750	Cold	5-10	60	P	Smooth / Smooth
10/5/2010 10.12	112/113	221	JS	D - 1	750	Cold	5-10	40	P	Smooth / Smooth

12/00 - E.D.R.

QC Initials : E.D.R.



**Mid - America Lining Co.**

**PANEL SEAMING FORM**

**Page:** 12

Project Name: 12 st Landfill Project Location: Otsego Twp, MI Material Description: 40 Mil LLDPE

Date / Time	Seam Number	Seam Length	Seamer Initials	Machine Number	Temp. Setting	Weather	Winds	Ambient Temp.	DS Test P/F	Comments
10/5/2010 10.30	113/114	214	MR	D - 5	750	Cold	5-10	45	P	Smooth / Smooth
10/5/2010 11.45	114/107	21	MR	D - 5	750	Cold	5-10	60	P	Smooth / Textured
10/5/2010 11.47	114/117	72	MR	D - 5	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 11.53	114/118	72	MR	D - 5	750	Cold	5-10	60	P	Smooth / Smooth
10/5/2010 12.02	114/119	48	MR	D - 5	750	Cold	5-10	60	P	Smooth / Textured
10/5/2010 11.40	107/117	7	MR	D - 5	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 11.00	117/118	7	MR	D - 5	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 11.05	118/119	7	MR	D - 5	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 11.57	108/117	23	JS	D - 1	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 11.59	109/117	23	JS	D - 1	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 12.02	110/117	23	JS	D - 1	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 12.06	111/117	3	JS	D - 1	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 12.06	111/118	20	JS	D - 1	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 12.08	116/118	21	JS	D - 1	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 12.10	102/118	33	JS	D - 1	750	Cold	5-10	60	P	Textured / Textured

12/00 - E.D.R.

QC Initials : E.D.R.



Mid - America Lining Co.

**PANEL SEAMING FORM**

**Page:** 13

Project Name: 12 st Landfill Project Location: Otsego Twp, MI Material Description: 40 Mil LLDPE

Date / Time	Seam Number	Seam Length	Seamer Initials	Machine Number	Temp. Setting	Weather	Winds	Ambient Temp.	DS Test P/F	Comments
10/5/2010 12.14	102/119	46	JS	D - 1	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 9.05	102/103	80	MR	D - 5	750	Cold	5-10	60	P	Smooth / Smooth
10/5/2010 9.30	103/105	38	MR	D - 5	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 9.34	103/106	41	MR	D - 5	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 9.25	105/106	12	MR	D - 5	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 9.55	104/105	38	MR	D - 5	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 10.00	104/106	41	MR	D - 5	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 9.08	107/108	58	JS	D - 1	750	Cold	5-10	60	P	Smooth / Smooth
10/5/2010 9.16	108/109	61	JS	D - 1	750	Cold	5-10	60	P	Smooth / Smooth
10/5/2010 9.28	109/110	62	JS	D - 1	750	Cold	5-10	60	P	Smooth / Smooth
10/5/2010 9.40	110/111	65	JS	D - 1	750	Cold	5-10	60	P	Smooth / Smooth
10/5/2010 10.59	111/115	28	JS	D - 1	750	Cold	5-10	60	P	Smooth / Smooth
10/5/2010 11.04	111/116	39	JS	D - 1	750	Cold	5-10	60	P	Smooth / Smooth
10/5/2010 10.53	115/116	22.5	JS	D - 1	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 11.18	104/115	14	JS	D - 1	750	Cold	5-10	60	P	Textured / Textured

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QC Initials : E.D.R.



**Mid - America Lining Co.**

**PANEL SEAMING FORM**

**Page:** 14

Project Name: 12 st Landfill Project Location: Otsego Twp, MI Material Description: 40 Mil LLDPE

Date / Time	Seam Number	Seam Length	Seamer Initials	Machine Number	Temp. Setting	Weather	Winds	Ambient Temp.	DS Test P/F	Comments
10/5/2010 11.20	106/115	12	JS	D - 1	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 11.22	103/115	2	JS	D - 1	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 11.22	103/116	22	JS	D - 1	750	Cold	5-10	60	P	Textured / Textured
10/5/2010 11.24	102/116	19	JS	D - 1	750	Cold	5-10	60	P	Textured / Textured
10/5/10 14.35	107/54	60	MR	D-5	750	Cold	5-10	60	P	Smooth / Smooth
10/5/2010 14.15	75/76	27	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 14.20	75/77	32	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 14.30	75/78	32	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 14.45	75/79	32	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 15.00	75/80	35	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 15.12	75/81	32	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 15.25	75/82	20	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 17.00	73/84	7	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 16.50	73/83	16	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 16.30	72/83	22	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 16.20	71/83	23	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL

12/00 - E.D.R.

QC Initials : E.D.R.



**Mid - America Lining Co.**

**PANEL SEAMING FORM**

**Page:** 15

Project Name: 12 st Landfill Project Location: Otsego Twp, MI Material Description: 40 Mil LLDPE

Date / Time	Seam Number	Seam Length	Seamer Initials	Machine Number	Temp. Setting	Weather	Winds	Ambient Temp.	DS Test P/F	Comments
10/5/2010 16.10	69/83	22	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 16.05	R94/83	8	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 16.00	38/83	21	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 12.20	38/89	21	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 12.10	43/89	31	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 12.01	43/91	20	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 12.00	42/91	2	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 11.56	42/92	21	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 11.55	41/92	2	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 11.51	41/93	21	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 11.50	40/93	2	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 11.46	40/95	21	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 11.45	45/95	2	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 11.35	45/96	21	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 17.00	74/84	1	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL

12/00 - E.D.R.

QC Initials : E.D.R.



**Mid - America Lining Co.**

**PANEL SEAMING FORM**

**Page:** 16

Project Name: 12 st Landfill Project Location: Otsego Twp, MI Material Description: 40 Mil LLDPE

Date / Time	Seam Number	Seam Length	Seamer Initials	Machine Number	Temp. Setting	Weather	Winds	Ambient Temp.	DS Test P/F	Comments
10/5/2010 11.33	46/96	2	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 11.21	46/97	20	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 11.20	47/97	2	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 11.11	47/99	21	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 11.10	48/99	2	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 11.00	48/100	21	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/5 BL
10/5/2010 11.00	50/100	2	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/7 BL
10/5/2010 18.00	50/101	20	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/7 BL
10/5/2010 17.50	51/101	2	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/7 BL
10/5/2010 17.40	51/112	21	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/7 BL
10/5/2010 17.40	52/112	1	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/7 BL
10/5/2010 17.30	52/113	21	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/7 BL
10/5/2010 17.30	53/113	1	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/7 BL
10/5/2010 17.20	53/114	21	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/7 BL
10/5/2010 17.20	54/114	1	HM	MX - 8	300	Cold	5-10	60	P	Extrusion Weld VTOK - 10/7 BL

12/00 - E.D.R.

QC Initials : E.D.R.


**Mid - America Lining Co.**
**NON - DESTRUCTIVE TEST LOG**

 Page: 6

 Project Name: 12 st Landfill Project Location: Otsego Twp., MI. Material Description: 40 Mil LLDPE

Date Tested	Seam Number	Tester Initial	Air Test Information						Comments
			Start P.S.I.	Finish P.S.I.	+ / -	Start Time	Finish Time	(P / F)	
9/23/10	69/70	SS	31	30	-1	10.50	10.57	P	Textured / Textured
9/23/10	71/72	SS	31	31	0	11.00	11.07	P	Smooth / Smooth
9/23/10	72/73	SS	31	30	-1	11.00	11.07	P	Smooth / Smooth
9/23/10	73/74	SS	31	30	-1	11.01	11.08	P	Smooth / Smooth
9/23/10	74/75	SS	31	31	0	11.15	11.22	P	Smooth / Textured
9/23/10	74/75	SS	31	30	-1	11.20	11.27	P	Smooth / Textured
9/23/10	74/75	SS	31	31	0	11.23	11.30	P	Smooth / Textured
10/4/10	76/77	SS	31	29	-2	15.19	15.26	P	Smooth / Smooth
10/4/10	77/78	SS	31	29	-2	15.17	15.24	P	Smooth / Smooth
10/4/10	78/79	SS	31	29	-2	15.05	15.12	P	Smooth / Smooth
10/4/10	79/80	SS	31	29	-2	15.05	15.12	P	Smooth / Smooth
10/4/10	80/81	SS	31	31	0	15.06	15.13	P	Smooth / Smooth
10/4/10	81/82	SS	31	31	0	15.06	15.13	P	Smooth / Smooth
10/4/10	83/84	SS	31	29	-2	16.08	16.15	P	Smooth / Smooth
10/4/10	84/85	SS	31	28	-3	15.29	15.36	P	Smooth / Smooth
10/4/10	85/86	SS	31	29	-2	15.30	15.37	P	Smooth / Smooth
10/4/10	86/87	SS	31	29	-2	15.41	15.48	P	Smooth / Smooth
10/4/10	87/88	SS	31	31	0	15.42	15.49	P	Smooth / Smooth
10/4/10	83/89	SS	31	30	-1	16.09	16.16	P	Smooth / Smooth
10/4/10	89/90	SS	31	28	-3	16.23	16.30	P	Smooth / Smooth
10/4/10	89/91	SS	31	31	0	16.10	16.17	P	Smooth / Smooth
10/4/10	90/91	SS	31	31	0	16.23	16.30	P	Textured / Textured

12/00 - E.D.R.

 Q.C. Initials: E.D.R.



**Mid - America Lining Co.**

**NON - DESTRUCTIVE TEST LOG**

**Page:** 7

Project Name: 12 st Landfill Project Location: Otsego Twp., MI. Material Description: 40 Mil LLDPE

Date Tested	Seam Number	Tester Initial	Air Test Information						Comments
			Pressure		Time		Results		
			Start P.S.I.	Finish P.S.I.	+ / -	Start Time	Finish Time	(P / F)	
10/4/10	90/92	SS	31	28	-3	16.24	16.31	P	Smooth / Smooth
10/4/10	91/92	SS	31	30	-1	16.10	16.17	P	Smooth / Smooth
10/4/10	92/93	SS	31	29	-2	16.20	16.27	P	Smooth / Smooth
10/4/10	92/93	SS	31	29	-2	16.33	16.40	P	Smooth / Smooth
10/4/10	93/94	SS	31	31	0	17.07	17.14	P	Smooth / Smooth
10/4/10	93/95	SS	31	29	-2	16.36	16.43	P	Smooth / Smooth
10/4/10	94/95	SS	31	29	-2	17.06	17.13	P	Textured / Textured
10/4/10	94/96	SS	31	29	-2	17.06	17.13	P	Smooth / Smooth
10/4/10	95/96	SS	31	29	-2	16.35	16.42	P	Smooth / Smooth
10/4/10	96/97	SS	31	30	-1	17.25	17.32	P	Smooth / Smooth
10/4/10	97/98	SS	31	31	0	17.35	17.42	P	Smooth / Smooth
10/4/10	97/99	SS	31	30	-1	17.26	17.33	P	Smooth / Smooth
10/4/10	97/99	SS	31	30	-1	17.36	17.43	P	Smooth / Smooth
10/4/10	98/99	SS	31	30	-1	17.32	17.39	P	Textured / Textured
10/4/10	98/100	SS	31	29	-2	17.36	17.43	P	Smooth / Smooth
10/4/10	99/100	SS	31	30	-1	17.26	17.33	P	Smooth / Smooth
10/4/10	100/101	SS	31	30	-1	17.46	17.53	P	Smooth / Smooth
10/4/10	76/84	SS	31	30	-1	15.18	15.25	P	Textured / Textured
10/4/10	76/85	SS	31	29	-2	15.29	15.36	P	Textured / Textured
10/4/10	76/86	SS	31	31	0	15.30	15.37	P	Textured / Textured
10/4/10	76/87	SS	31	29	-2	15.41	15.48	P	Textured / Textured
10/4/10	76/88	SS	31	30	-1	15.42	15.49	P	Textured / Textured

12/00 - E.D.R.

Q.C. Initials: E.D.R.



**Mid - America Lining Co.**

**NON - DESTRUCTIVE TEST LOG**

**Page:** 8

Project Name: 12 st Landfill Project Location: Otsego Twp., Mi. Material Description: 40 Mil LLDPE

Date Tested	Seam Number	Tester Initial	Air Test Information						Comments
			Pressure	Start P.S.I.	Finish P.S.I.	+ / -	Start Time	Finish Time	
10/5/10	101/112	SS	31	31	0	15.33	15.40	P	Smooth / Smooth
10/5/10	101/112	SS	31	29	-2	15.45	15.52	P	Smooth / Smooth
10/5/10	101/112	SS	31	31	0	15.40	15.47	P	Smooth / Smooth
10/5/10	112/113	SS	31	29	-2	13.27	13.34	P	Smooth / Smooth
10/5/10	113/114	SS	31	28	-3	13.27	13.34	P	Smooth / Smooth
10/5/10	114/117	SS	31	31	0	13.39	13.46	P	Smooth / Textured
10/5/10	114/118	SS	31	29	-2	13.51	13.58	P	Smooth / Smooth
10/5/10	114/119	SS	31	30	-1	13.51	13.58	P	Smooth / Textured
10/5/10	117/118	SS	31	31	0	13.51	13.58	P	Textured / Textured
10/5/10	118/119	SS	31	30	-1	13.40	13.47	P	Textured / Textured
10/5/10	54/107	SS	31	30	-1	15.20	15.27	P	Smooth / Smooth
10/5/10	107/117	SS	31	31	0	13.39	13.46	P	Textured / Textured
10/5/10	107/108	SS	31	29	-2	15.05	15.12	P	Smooth / Smooth
10/5/10	108/109	SS	31	30	-1	15.05	15.12	P	Smooth / Smooth
10/5/10	109/110	SS	31	30	-1	14.53	14.60	P	Smooth / Smooth
10/5/10	110/111	SS	31	31	0	14.52	14.59	P	Smooth / Smooth
10/5/10	111/115	SS	31	31	0	14.40	14.47	P	Smooth / Smooth
10/5/10	111/116	SS	31	31	0	14.40	14.47	P	Smooth / Smooth
10/5/10	115/116	SS	31	30	-1	14.40	14.47	P	Textured / Textured
10/5/10	104/115	SS	31	31	0	14.29	14.36	P	Textured / Textured
10/5/10	106/115	SS	31	31	0	14.28	14.35	P	Textured / Textured
10/5/10	103/116	SS	31	30	-1	14.28	14.35	P	Textured / Textured

12/00 - E.D.R.

Q.C. Initials: E.D.R.



## Mid - America Lining Co.

## ***NON - DESTRUCTIVE TEST LOG***

Page: 9

Project Name: 12 st Landfill Project Location: Otsego Twp., MI. Material Description: 40 Mil LLDPE

12/00-EFB

Q.C. Initials: E.D.R.



Mid - America Lining Co.

**FIELD DESTRUCTIVE TEST LOG**

Page: 2 of: 3

Project Name: 12st Landfill Project Location: Otsego Twp., MI. Material Description: 40 Mil LLDPE

Date	DS Number	Seam Number	Seamer Initials	Mach. Number	Peel Values - Lbs./Inches			Shear Values - Lbs./Inches			Field Pass	Lab Pass
9/21/10	16	63/65	MR	D - 5	65 80	67 77	71 72	79	80	81	P	P
9/21/10	17	66/67	MR	D - 5	70 70	72 73	69 72	78	79	81	P	P
9/21/10	18	65/66	RM	D - 3	70 75	71 77	73 79	81	82	82	P	P
9/21/10	19	36/66	HM	MX - 1	69	70	71	66	69	69	P	P
9/23/10	20	71/72	MR	D - 5	75 79	76 81	76 76	85	88	95	P	P
9/23/10	21	68/70	RM	D - 3	76 91	76 86	79 84	81	91	93	P	P
9/23/10	22	74/75	MR	D - 5	76 79	77 81	76 79	80	82	87	P	P
10/4/10	23	78/79	MR	D - 5	81 96	97 100	93 110	128	131	144	P	P
10/4/10	24	76/87	RM	D - 3	98 103	91 98	92 93	98	104	108	P	P
10/4/10	25	83/84	JS	D - 1	90 97	90 92	86 97	121	125	125	P	P
10/4/10	26	83/89	JS	D - 1	91 104	95 95	91 96	116	119	120	P	P
10/4/10	27	92/93	MR	D - 5	95 101	96 98	85 92	118	118	121	P	P
10/4/10	28	95/96	JS	D - 1	90 96	90 95	91 95	123	123	126	P	P
10/4/10	29	99/100	RM	D - 3	92 101	93 99	93 93	117	120	122	P	P
10/5/10	30	75/79	HM	MX - 8	67	70	71	73	73	74	P	P

12/00 - E.D.R.

Q.C. Initials: E.D.R.



***Mid - America Lining Co.***

# **FIELD DESTRUCTIVE TEST LOG**

Page: 3 of: 3

Project Name: 12st Landfill Project Location: Otsego Twp., MI. Material Description: 40 Mil LLDPE

12/00 - E.D.R.

Q.C. Initials: E.D.R.



# Mid - America Lining Co.

## REPAIR LOG

Page: 7

Project Name: 12st Landfill Project Location: Otsego Twp., MI. Material Description: 40 MIL LLDPE Tx

Weld Data			Vacuum Test Data			Repair Number	Seam Number	Locations / Comments
Date	Welder Initials	Machine Number	Date	Tester Initials	Result (P / F)			
9/21/10	HM	MX - 1	9/21/10	BL	P	91	66/67	70' DS - 17 (2 X 4)
9/21/10	HM	MX - 1	9/21/10	BL	P	92	65/66	14' DS - 18 (2 X 4)
9/21/10	HM	MX - 1	9/21/10	BL	P	93	36/66	77' DS - 19 (2 X 4)
9/23/10	HM	MX - 1	9/23/10	BL	P	94	68/69	210' - 250' (7 X 40)
9/23/10	HM	MX - 1	9/23/10	BL	P	95	68/69/70	168' "T" (2 X 3)
9/23/10	HM	MX - 1	9/23/10	BL	P	96	69/70/71	162' "T" (2 X 3)
9/23/10	HM	MX - 1	9/23/10	BL	P	97	74/75	162' - 174' (2 X 8)
9/23/10	HM	MX - 1	9/23/10	BL	P	98	74/75	189' (2 X 3)
9/23/10	HM	MX - 1	9/23/10	BL	P	99	71/72	30' DS - 20 (2 X 4)
9/23/10	HM	MX - 1	9/23/10	BL	P	100	68/70	20' DS - 21 (2 X 4)
9/23/10	HM	MX - 1	9/23/10	BL	P	101	74/75	112' DS - 22 (2 X 4)
10/5/10	HM	MX - 8	10/5/10	BL	P	102	75/79	105' DS - 30 (2 X 4)
10/5/10	RM	MX - 9	10/5/10	BL	P	103	78/79	45' DS - 23 (2 X 4)
10/5/10	RM	MX - 9	10/5/10	BL	P	104	76/87/88	22' "T" (2 X 3)
10/5/10	RM	MX - 9	10/5/10	BL	P	105	76/87	30' DS - 24 (2 X 4)

12/00 - E.D.R.

Q.C. Initials: E.D.R.



**Mid - America Lining Co.**

**REPAIR LOG**

Page: 8

Project Name: 12st Landfill Project Location: Otsego Twp., Mi. Material Description: 40 Mil LLDPE Tx

Weld Data			Vacuum Test Data				Locations / Comments	
Date	Welder Initials	Machine Number	Date	Tester Initials	Result (P / F)	Repair Number	Seam Number	
10/5/10	RM	MX - 9	10/5/10	BL	P	106	76/86/87	61' "T" (2 X 3)
10/5/10	RM	MX - 9	10/5/10	BL	P	107	76/85/86	100' "T" (2 X 3)
10/5/10	RM	MX - 9	10/5/10	BL	P	108	76/84/85	145' Boot & "T" (3 X 8)
10/5/10	RM	MX - 9	10/5/10	BL	P	109	83/84	135' DS - 25 (2 X 4)
10/5/10	RM	MX - 9	10/5/10	BL	P	110	83/89	20' DS - 26 (2 X 4)
10/5/10	RM	MX - 9	10/5/10	BL	P	111	89/90/91	154' "T" (2 X 3)
10/5/10	RM	MX - 9	10/5/10	BL	P	112	90/91/92	150' "T" (2 X 3)
10/5/10	RM	MX - 9	10/5/10	BL	P	113	92/93	92' DS - 27 (2 X 4)
10/5/10	RM	MX - 9	10/7/10	BL	P	114	92/93	214' Penetration (Boot)
10/5/10	RM	MX - 9	10/5/10	BL	P	115	93/94/95	112' "T" (2 X 3)
10/5/10	RM	MX - 9	10/5/10	BL	P	116	94/95/96	108' "T" (2 X 3)
10/5/10	RM	MX - 9	10/5/10	BL	P	117	95/96	175' DS - 28 (2 X 4)
10/5/10	RM	MX - 9	10/5/10	BL	P	118	79/99	92' Penetration (Boot)
10/5/10	RM	MX - 9	10/5/10	BL	P	119	97/98/99	82' "T" (2 X 3)
10/5/10	RM	MX - 9	10/5/10	BL	P	120	98/99/100	80' "T" (2 X 3)

12/00 - E.D.R.

Q.C. Initials: E.D.R.



## Mid - America Lining Co.

### REPAIR LOG

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Project Name: 12st Landfill Project Location: Otsego Twp., MI. Material Description: 40 Mil LLDPE Tx

Weld Data			Vacuum Test Data			Repair Number	Seam Number	Locations / Comments
Date	Welder Initials	Machine Number	Date	Tester Initials	Result (P / F)			
10/5/10	RM	MX - 9	10/5/10	BL	P	121	99/100	115' DS - 29 (2 X 4)
10/5/10	RM	MX - 9	10/7/10	BL	P	122	Panel 97	100' (2 X 2)
10/6/10	HM	MX - 8	10/7/10	BL	P	123	114/118/119	48' "T" (2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	124	114/117/118	120' "T" (2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	125	107/114/117	48' "T" (2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	126	107/108/117	192' "T" (2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	127	108/109/117	169' "T" (2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	128	109/110/117	146' "T" (2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	129	110/111/117/ 118	120' - 123' "T" (2 X 4)
10/6/10	HM	MX - 8	10/7/10	BL	P	130	111/116/118	100' "T" (2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	131	116/118	88' DS - 32 (2 X 4)
10/6/10	HM	MX - 8	10/7/10	BL	P	132	102/116/118	79' "T" (2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	133	108/118/119	46' "T" (2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	134	Panel 108	31' (2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	135	Panel 108	25' (2 X 3)

12/00 - E.D.R.

Q.C. Initials: E.D.R.



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### REPAIR LOG

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Project Name: 12st Landfill Project Location: Otsego Twp., MI. Material Description: 40 Mil LLDPE Tx

Weld Data			Vacuum Test Data				Locations / Comments		
Date	Welder Initials	Machine Number	Date	Tester Initials	Result (P / F)	Repair Number	Seam Number		
10/6/10	HM	MX - 8	10/7/10	BL	P	136	Panel 108	13'	(2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	137	Panel 108	6'	(2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	138	107/114	4'	(2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	139	54/107	43' DS - 33	(2 X 4)
10/6/10	HM	MX - 8	10/7/10	BL	P	140	50/100/101	560' "T"	(2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	141	46/97	500' DS - 35	(2 X 4)
10/6/10	HM	MX - 8	10/7/10	BL	P	142	109/110	12' DS - 34	(2 X 4)
10/6/10	HM	MX - 8	10/7/10	BL	P	143	43/89	275'	(2 X 3)
10/6/10	HM	MX - 8	10/5/10	BL	P	144	45/46/96/97	490' "T"	(2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	145	53/54/107/114	649' "T"	(2 X 4)
10/6/10	HM	MX - 8	10/7/10	BL	P	146	Panel 111	30' Penetration (Boot)	
10/6/10	HM	MX - 8	10/7/10	BL	P	147	111/115/116	28' "T"	(2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	148	104/106/115	14' "T"	(2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	149	103/106/115/116	26' - 28' "T"	(2 X 3)
10/6/10	HM	MX - 8	10/7/10	BL	P	150	102/103/116	48' "T"	(2 X 3)

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Q.C. Initials: E.D.R.



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## **REPAIR LOG**

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Project Name: 12st Landfill Project Location: Otsego Twp., MI. Material Description: 40 Mil LLDPE Tx

12/00 - E.D.R.

Q.C. Initials: *E.D.R.*